

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
25 March 2004 (25.03.2004)

PCT

(10) International Publication Number
WO 2004/025255 A3

(51) International Patent Classification⁷: **G01N 33/53**

(21) International Application Number:
PCT/US2003/028525

(22) International Filing Date:
11 September 2003 (11.09.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/409,874 11 September 2002 (11.09.2002) US

(71) Applicant (for all designated States except US): **EMORY UNIVERSITY** [US/US]; 1380 South Oxford Road, N.E., Atlanta, GA 30322 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LE, Ngoc, Anh** [US/US]; 1779 Lavista Oaks Drive, Decatur, GA 30033 (US). **BROWN, W. Virgil** [US/US]; 3208 Habersham Road, Atlanta, GA 30305 (US).

(74) Agent: **DAIGNAULT, Ronald, A.**; Merchant & Gould P.C., P.O. Box 2903, Minneapolis, MN 55402-0903 (US).

(81) Designated States (*national*): AE, AG, AI, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
16 September 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHODS OF ASSESSING ENDOTHELIAL DYSFUNCTION USING ACUTE TRANSIENT RESPONSE FOLLOWING FAT ADMINISTRATION

(57) **Abstract:** The present invention provides methods utilizing the fat-induced antibody response (FIAR) to assess endothelial function. Additional methods are provided that utilize FIAR for diagnosing and monitoring the progression of vascular diseases, the success of treatment for these diseases, and as a measure of the oxidative stress imposed upon vascular endothelium. Still more methods are provided for measuring the oxidation products of lipids in blood following the administration of a polyunsaturated fatty acid (fat-induced acute response) to monitor the treatment success of a vascular disease, for monitoring the degree of endothelial inflammation, and for diagnosing and monitoring the progression of a cardiovascular disease.

WO 2004/025255 A3